ON A LARVAL TELEOST FROM NEW SOUTH WALES

By J. Douglas Ogilby.

The only notice of a "leptocephalid" from the New South Wales coast of which I have been able to find any record is that of Mr. Waite (Proc. Linn. Soc. N. S. Wales, (2) ix. 1895, p. 225), who mentions two examples, which may possibly belong to different species, from Port Jackson and Maroubra, but gives no description by which our form may be distinguished from such as may occur on other parts of the Australian coast. Mr. Waite's examples were noticed under the heading of "*Leptocephalus* sp." but this generic name having been primarily used by Scopoli in 1777 for the larval form of the conger eel (the *Muræna conger* of Linnæus, 1758) cannot be applied to the present fish, being necessarily restricted to the true congers, the type of which must therefore be known as *Leptocephalus conger*.

As three examples have lately come into my hands I propose to give here such a description as will enable Australian scientists to recognise our form.

My first specimen was obtained early in the present month on the beach at La Perouse, and came ashore alive at my feet, the wind being at the time light and off the land, the bay without a ripple, and the tide on a strong ebb; I mention these particulars to show that there were no perceptible extraneous influences at work of sufficient importance to account for the stranding. My other two specimens were collected at Maroubra by Mr. Whitelegge, and kindly handed over to me for the purposes of this paper.

An examination of these larvæ reveals so many points of difference between our fish and the *Leptocephalus morrisii* of the European Seas as to leave no room for doubt that they constitute the larval forms of two very distinct genera of fishes; but until we are in a position to keep such larvæ in confinement, and so observe and record every phase of their development, any attempt

to identify the parent form is mere conjecture, and tends to confusion. I shall, therefore, content myself with drawing attention to the entire absence of any vestige of caudal fin, and make the obvious suggestion that our form is the larva of one of the ophichthyoid eels; so far, however, none of these eels are known to occur on our coast, or at least very rarely.*

In considering the subject of the parentage of these larvæ we must not lose sight of the fact that they are not confined to the apodal fishes, but are common also to certain isospondylous and iniomous genera, such as *Albula*, *Elops*, *Alepocephalus*, and *Stomias*†. *Fierasfer* also is said to pass through similar transitional stages.

The following description is taken from the three examples above referred to :—

Body riband-shaped, of about equal depth throughout, consisting of 148 to 150 metameres, its depth 13 to 17 in its length. Head moderate, not conspicuously distinguished from the body, from which it is separated above by a more or less shallow concavity, its length $16\frac{1}{2}$ to 21 in the total length: snout rather long and pointed, gently ascending on its anterior moiety; cleft of mouth wide, extending to between the middle and posterior border of the eye. Upper jaw with five, lower with six strong, acute, lanceolate, widely set teeth in each ramus, directed forwards and inwards; one or two small teeth, normally directed, between each pair of large teeth; the anterior pair in each jaw are strongly compressed, and originate on the outside (above and below) of the mouth. Eye moderate, its diameter $\frac{1}{5}$ to $\frac{1}{6}$ of the head and about $\frac{1}{2}$ of the snout. Dorsal fin originating

* *Ophisurus serpens* has been recorded once from Port Jackson, and is found as far south as Tasmania, whence I have recorded a specimen in very bad condition.

† Jordan and Evermann, discussing the ancestry of the apodal fishes, remark :—"The *Apodes* are probably descended from Isospondylous or Iniomous types, possibly from ancestors of the *Anacanthini*, and their divergence from typical forms is, in most respects, a retrogression." I have not seen Dr. Gilbert's papers dealing with these isospondylous larvæ.

immediately behind the occiput; anal from $\frac{2}{5}$ to $\frac{3}{5}$ nearer to the tip of the tail than to that of the snout; dorsal and anal rays distinct in one specimen, only a few of the anterior anal rays visible in the others: pectoral fins more or less developed: extremity of the tail free. A short oblique line of dark pigment behind each metamere on the lower side of the vertebral column; intestine with a series of about twenty pigment spots at equal distances apart, many of the spots about as long as the interspace.